

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

WHAT IS CLAIMED IS:

1. [currently amended] An antenna comprising:
a ground plane;
a first conductor having a first length extending longitudinally above the ground plane and having a first end electrically connected to the ground plane at a first location;
a second conductor having a second length extending longitudinally above the ground plane and parallel to the first conductor, the second conductor having a first end electrically connected to the ground plane at a second location;
an antenna feed coupled to the first conductor; *and*
a current distribution having a substantially circular cross-section;
wherein the first and second conductors are equidistant from the ground plane.

2. [original] The antenna of claim 1 wherein the first and second conductors are both disposed on a single substrate.

3. [original] The antenna of claim 2 wherein the single substrate comprises a flexible printed circuit substrate.

4. [original] The antenna of claim 1 wherein the first length is approximately equal to the second length.

5. [original] The antenna of claim 4 wherein the first location is spaced apart from the second location by a distance approximately equal to the first length.

6. [original] The antenna of claim 1 wherein the first and second conductors comprise a first antenna element and further comprising a second antenna element having a third conductor and a fourth conductor.

7. [original] The antenna of claim 6 wherein the second antenna element is a parasitic element.

8. [original] The antenna of claim 6 wherein the first and second antenna elements are parallel to each other.

9. [original] The antenna of claim 6 wherein the first and second antenna elements are non-parallel to each other.

10. [original] The antenna of claim 6 wherein the third and fourth conductors are equidistant from the ground plane at a distance equal to a distance between the first and second conductors and the ground plane.

11. [original] The antenna of claim 6 wherein the third and fourth conductors are equidistant from the ground plane at a distance different from a distance between the first and second conductors and the ground plane.

12. [Canceled] The antenna of claim 1 further comprising an electronic device having a housing and wherein the ground plane is adjacent to a first surface of the housing and the first and second conductors are adjacent to a second surface of the housing.

13. [original] The antenna of claim 1 wherein the first and second conductors are arched above the ground plane.

14. [original] The antenna of claim 13 wherein the first and second conductors are electrically connected to the ground plane with respective spring contacts.

15. [Canceled] The antenna of claim 1 further comprising an electronic device having a housing and wherein the ground plane is adjacent to a first surface of the housing and the first and second conductors are adjacent to a second surface of the housing.

16. [currently amended] An antenna comprising:

a ground plane;

an array of radiating elements, each of the radiating elements having a first conductor extending longitudinally above the ground plane and having a first end electrically connected to the ground plane at a first location, and a second conductor extending longitudinally above the ground plane and parallel to the first conductor, the second conductor having a first end electrically connected to the ground plane at a second location;

an antenna feed coupled to the first conductor of at least one of the radiating elements; and

a current distribution having a substantially circular cross-section;

wherein the first and second conductor of each of the radiating elements are equidistant from the ground plane.

17. [original] The antenna of claim 16 wherein the first and second conductors of each of the radiating elements are both disposed on a respective single substrate.

18. [original] The antenna of claim 17 wherein each of the single substrates comprises a flexible printed circuit substrate.

19. [original] The antenna of claim 16 wherein at least one of the radiating elements is a parasitic element.

20. [original] The antenna of claim 16 wherein at least some of the radiating elements are parallel to each other.

21. [original] The antenna of claim 16 wherein at least some of the radiating elements are orthogonal to at least some others of the radiating elements.

22. [original] The antenna of claim 16 wherein all of the first and second conductors are equidistant from the ground plane.

23. [original] The antenna of claim 16 wherein the first and second conductors of at least one of the radiating elements are spaced apart from the ground plane at a first distance and the first and second conductors of at least one other of the radiating elements are spaced apart from the ground plane at a second distance different from the first distance.

24. [original] The antenna of claim 16 wherein each of the first conductors has a length and each of the second conductors has a length approximately equal to the length of a corresponding first conductor.

25. [original] The antenna of claim 24 wherein the length of the first and second conductors of at least one of the radiating elements is different from the length of the first and second conductors of at least one other of the radiating elements.

26. [currently amended] An antenna comprising:

a ground plane;

a generally "U"-shaped conductor having the first and second parallel legs lying in a plane spaced apart from the ground plane;

an antenna feed coupled to a first end of the first leg;

a short between the ground plane and at least one of the first and second legs; ;

a capacitive portion of the antenna located in a plane defined by the first and second legs;

an inductive portion of the antenna located between the ground plane and the first and second legs; and

a current distribution produced by the antenna having a substantially circular cross-section which encompasses sections of both the capacitive portion of the antenna and the inductive portion of the antenna.

27. [original] The antenna of claim 26 wherein the short extends from the ground plane to the first end of the first leg.

28. [original] The antenna of claim 26 further comprising a parasitic antenna element in proximity to the "U"-shaped conductor.

of
29. [original] The antenna, if claim 28 wherein the parasitic antenna element is disposed to a side of the "U"-shaped conductor.

30. [original] The antenna of claim 28 wherein the parasitic antenna element is disposed between the plane of the "U"-shaped conductor and the ground plane.

31. [original] The antenna of claim 28 wherein the parasitic antenna element comprises a first conductor having a first length extending longitudinally above the ground plane and having a first end electrically connected to the ground plane, a second conductor having a second length extending longitudinally above the ground plane and parallel to the first conductor, the second conductor having a first end electrically connected to the ground plane, wherein the first and second conductors are equidistant from the ground plane.

32. [new] An antenna comprising:

a ground plane;

a first conductor having a first length extending longitudinally above the ground plane and having a first end and a second end, the first end electrically connected to the ground plane at a first location;

a second conductor having a second length extending longitudinally above the ground plane and parallel to the first conductor, the second conductor having a first end and a second end, the first end positioned opposite the first end of the first conductor and electrically connected to the ground plane at a second location, the second end of the second conductor extended longitudinally beyond the second end of the first conductor;

an antenna feed coupled to the first conductor;

wherein the first and second conductors are equidistant from the ground plane.

Amendments to the Drawings

The drawing figure or drawing Figure 24 has been amended. The specific changes which have been made to Figure 24 is the addition of a showing of a parasitic antenna element disposed between the plane of the "U"-shaped conductor and the ground plane. Applicant submits that no new matter has been added to the application by this addition to the drawings and that the Examiners objection has been overcome.

Claims 12 and 15 are no longer pending, thus applicant submits that the Examiners objections to the drawings regarding those claims is moot.